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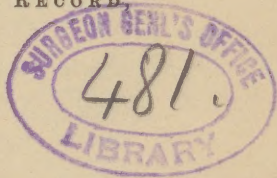
GONORRHOIC
IRIDO-CHOROIDITIS.

BY

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ON GONORRHOIC IRIDO-CHOROIDITIS.

THE following cases are published as illustrations of a disease, the existence of which is still doubted by some authors. With regard to the frequency of this affection I concur in the opinion of Förster ("Graefe und Saemisch, Handbuch der Augenheilkunde," Band 7, p. 86) and Leber ("Bericht über die zwölfte Versammlung der ophthal. Gesellschaft," Heidelberg, 1879, p. 129), who believe that if, in every case of iritis, an examination be made of the urethra, or the history of the case be carefully inquired into, it will be found that this disease is not an uncommon one. How the gonorrhœa causes the disease of the iris and choroid is not known. Mackenzie and other English writers believe that it is caused by metastasis. Leber (*op. cit.*) thinks that the gonorrhœal rheumatism and iritis are the result of a diffusion of the gonorrhœal poison through the system by means of the circulation—a kind of metastasis of the virus, which, according to recent investigations of Neisser, is said to consist of peculiar micrococci.

CASE I.—A gentleman, about twenty years of age, contracted gonorrhœa some years before I saw him, which was followed by inflammation of right knee-joint, and iritis of right eye. Since then he has had repeatedly attacks of rheumatism. He has never had syphilis. Some months ago he again contracted gonorrhœa, and this attack was also followed by inflammation of knee-joint. He still has a slight urethral discharge. Two days ago his left eye began to pain him. On examination I found in the left eye an injection of the subconjunctival vessels on the temporal half of the sclerotic. There was no visible

change in cornea or iris. Vision was perfect. The right eye showed no signs of inflammation, but the pupil was bound down by numerous broad posterior synechiæ, and obstructed by a dense pigment deposit. Vision = $\frac{2}{30}$. The vision of this eye has been impaired since the attack of inflammation several years ago. Two days later the whole ocular conjunctiva of left eye was intensely injected; the aqueous was clear; the pupil widely dilated from the instillation of the sulphate of atropia, and the iris neither swollen nor discolored. An examination with the ophthalmoscope showed the interior of the eye healthy. On the following day there was great cedema of the ocular conjunctiva. The aqueous was cloudy, the iris swollen and discolored, the pupil much smaller than the day before, and in the pupil was a grayish exudation. The eye was very painful; there was photophobia and lachrymation, but no purulent discharge whatever. During the next three days the aqueous became more turbid, and on the fourth day the lower two-thirds of the anterior chamber were filled by a grayish gelatinous (fibrinous) exudation. Vision was now greatly impaired and the pain was exceedingly severe. On the following day there was less chemosis and less pain; the exudation in the anterior chamber had undergone no change. The pain had again increased. There was now, also, considerable circumcorneal injection in the right eye, which, up to this time, had been free from pain. The anterior chamber contained an exudation similar to that in the other eye, and the iris was swollen and discolored. The patient was now nearly blind in both eyes. During the next two days the eyes underwent but little change, except that the exudation seemed to contract. On the following day there was increased pain in the left eye, the chemosis was more marked, and the aqueous was again quite muddy. The right eye was decidedly better. During the following week there was a steady improvement in both eyes. In the left the chemosis gradually diminished. The aqueous became clear, the gelatinous exudation assumed first the shape of a lens, and then that of a disk, in which form it remained suspended in front

of the dilated pupil for several days, and then gradually disappeared. About this time a filmy exudation was noticed to cover the lower portion of Desce-met's membrane, and a mass of pigment made its appearance on the outer pupillary margin. The vitreous was so hazy that the details of the fundus could not be made out with the ophthalmoscope. Two weeks later there was still injection of the subconjunctival vessels for some distance around the cornea of the left eye. The cornea and the aqueous were perfectly clear. On the anterior capsule of the lens were several concentric grayish rings (the remains of the exudation), and the vitreous was still hazy. The tension of the eye was somewhat below the normal. Vision = $\frac{5}{27}$. About six weeks later, all injection of the ocular conjunctiva of left eye had disappeared. The iris was still somewhat discolored, but not swollen. The vitreous was clear and the fundus oculi apparently normal. Tension and vision were normal. The eye remained in this condition for about two and a half months; then there was again some pain, and injection of the vessels near the outer margin of the cornea, caused by the development of a phlyctenula in the limbus conjunctivalis, which speedily disappeared again. Since then the eye has given him no trouble. Vision is perfect. The urethral discharge disappeared shortly after the appearance of the iritis.

The treatment consisted in the application of leeches to the temples, frequent instillation of a one per cent. solution of the sulphate of atropia; cold applications to the lids, and the administration of one-half grain doses of calomel three times daily during the first week, and of large doses of iodide of potassium after that time. Morphine was given freely whenever there was much pain in the eye.

Remarks.—The fact that the two different attacks of gonorrhœa were each followed by iritis, shows, I think, that there was some connection between the urethral disease and the eye affection. Similar observations have been made by Mackenzie, Förster, and others. Mackenzie, in his classic "Treatise on the Diseases of the Eye," Am. Ed., 1855, page 53, states:

"Each time the patient catches gonorrhœa he is liable to an attack of synovitis or iritis, or suffers first from the one and afterward from the other. In some cases, however, there has been no new gonorrhœa, although a second or third attack of inflammation has affected the joint or the eye." Förster (*op. cit.*) says: "That this connection is not an accidental one is shown by the regularity with which different attacks of gonorrhœa in the same person are followed by iritis."

CASE II.—A young man, about twenty years of age, presented himself at St. Michael's Hospital for the treatment of his inflamed right eye. Some five years before he had had a severe attack of acute rheumatism. About six months ago he contracted gonorrhœa which was soon followed by inflammation of his right knee-joint and right hip-joint. During this attack his right eye became very much inflamed and painful. His physician looked upon the eye disease as a gonorrhœal conjunctivitis, and treated it successfully. Four months ago he had presented himself at this institution with a small ulcer of the cornea, which healed speedily under the usual treatment. After that he was entirely free from eye trouble till ten days ago, when his right eye became painful. He still had some gleet. On examining his eye I found great congestion and œdema of the whole ocular conjunctiva. The cornea was clear. The aqueous was cloudy, and in front of the lower half of the iris and the pupil was a thin membranous exudation with sharply-defined upper margin. The entire iris was discolored but not much swollen. The vitreous was hazy. Details of fundus could not be made out. Three days later the aqueous was clear, and the membranous exudation had nearly disappeared. All evidences of the eye affection had disappeared four weeks later.

The treatment consisted of leeches to the temple, instillations of a one per cent. solution of the sulphate of atropia, and the administration of salicylic acid, and the sodic carbonate in fifteen-grain doses three times daily.

Remarks.—Since an interval of about four months intervened between the disappearance of the ulcer of

the cornea and the development of the iritis, it is highly improbable that there was any connection between the two eye diseases. It cannot, however, be denied that the rheumatism may have had a share in causing the irido-choroiditis.

CASE III.—A rather thin but healthy man, forty-three years of age, who had never had syphilis or rheumatism, and had always enjoyed excellent vision, contracted gonorrhœa about three weeks before his eye disease began. I saw the patient for the first time in consultation with Dr. Lehlbach, on the 16th of November. The right eye had then been inflamed five days, and the left eye three days. There was still some discharge from the urethra. He had no rheumatism. The condition of the eyes was as follows: Right: both lids are puffy. The palpebral conjunctiva is congested but not swollen. The ocular conjunctiva is intensely injected and œdematous. There is no disease of the cornea. The aqueous is turbid. The iris is discolored but not much swollen in its upper half; in its lower half it is covered by a whitish granular deposit. The pupil is dilated, and its centre is occupied by a grayish disk-like exudation. (Atropin had been used for several days.) In the vitreous were numerous floating opacities which prevented examination of background of eye. Vision so much reduced that he could count fingers only at two feet. Tension normal; visual field intact; very great pain in eye; no purulent discharge. Left: lids, conjunctiva, and cornea same as right. Lower two-thirds of anterior chamber filled with a grayish gelatinous exudation, the upper margin of which is convex. Pupil contracted; fundus cannot be illuminated. Has only perception of light in this eye. Tension and field normal. Excessive pain; no purulent discharge.

Although leeches had already been applied to both temples, six more were applied to each side. The hourly instillations of a one per cent. solution of sulphate of atropia were continued, and iodide of potassium in fifteen-grain doses was administered three times daily.

November 18th. Right: no change. Left: Exuda-

tion somewhat diminished; upper margin irregular; pupil irregularly dilated; several broad posterior synechiae. Has still pain in eyes, and there is now some mucous discharge from eyes. Has been perspiring freely since yesterday. Ordered inunctions of mercurial ointment, twice daily, in addition to the other prescriptions.

November 20th. Right: conjunctiva as before; pupil widely dilated; whitish exudation on iris has disappeared; vitreous opaque; vision as before. Left: exudation in anterior chamber has been absorbed; lower half of pupillary margin irregular; vitreous opaque. Can recognize light from darkness only. Has still pain in both eyes. Continued treatment.

November 26th. Right: less œdema, otherwise no change. No pain. Less secretion. Left: aqueous again somewhat turbid; pupil more contracted than before, otherwise no change. Same treatment.

November 28th. Right: less œdema and less injection of conjunctiva. No other change. Left: there is again some fibrinous exudation in anterior chamber, otherwise as before. No change in treatment.

November 30th. Right: less injection and œdema of ocular conjunctiva, otherwise no change. Counts fingers in lower half of visual field. Left: less swelling of ocular conjunctiva; exudation in anterior chamber has again disappeared; pupil irregular, but wider than before; vision as before. Discontinued inunctions and substituted salicylic acid and sodic carbonate in fifteen-grain doses for potassium iodide.

December 12th. Right: ocular conjunctiva is pale and not swollen; aqueous clear; pupil widely dilated; vitreous still opaque. Left: same as right. Vision as before. In addition to the other remedies gave pilocarpinum, one-quarter grain hypodermically, daily, which produced neither profuse perspiration nor salivation, but caused great depression, and was therefore discontinued a few days later. Potassium iodide in thirty-grain doses, three times daily, was then given, also sulphate of quinia, three grains, three times daily.

January 19th. In the right eye the vitreous is now much clearer. Optic papilla and retinal vessels are

seen indistinctly. The vitreous in the left eye is about as opaque as before. His vision has sufficiently improved to enable him to walk about with safety. Continued same treatment.

March 20th. Till yesterday the sclerotic of both eyes was white. There is now some circumcorneal injection and a few phlyctenulæ are seen on margin of cornea in both eyes. Vision is now $V. = \frac{6}{60}$ in both. Patient has had an attack of diphtheria since I last saw him.

June 5th. The phlyctenulæ disappeared in a few days under the use of calomel dusted into the eyes. Since then the eyes have been free from irritation. There is now an abrasion of the epithelium almost in the centre of the cornea of the right eye. The vitreous still contains grayish opacities. Vision as before.

Since then I have not had an opportunity to test the man's vision, but it must have greatly improved, as he is now able to keep his account-books and read large print.

Remarks.—This case was one of the gravest cases of irido-choroiditis from any cause that I have ever seen. The disease attacked both eyes at the same time and with the same severity, and continued for more than six months, after which useful vision was restored by a gradual clearing up of the vitreous. As an uncommon feature of the case, may be mentioned the absence of all symptoms of rheumatism, although similar cases have been observed by Mackenzie, Ricord, and others.

An analysis of the above cases shows that in all of them a urethral discharge was still present at the time the irido-choroiditis made its appearance. Inflammation of one or more joints preceded the development of the eye affection in two cases, and in one it did not. Both eyes were affected in two cases, and one eye only in one case. All of the cases recovered. In all of the cases there was much pain in and around the eyes, there was slight sero-mucous discharge, and greatly impaired vision. The tension was normal in two, and somewhat reduced in one case. The visual field was intact in all. There

was more or less cedema of the lids, intense injection and cedema of the entire ocular conjunctiva, a gelatinous or fibrinous exudation in the anterior chamber, discoloration and swelling of the iris, contraction of the pupil, and more or less opacity of the vitreous in all of the cases.

The treatment consisted of leeches to the temples, in cold applications to the lids, instillations of a solution of atropia sulphate, cathartics, inunctions of mercurial ointment, and the administration of potassium iodide, sodic salicylate, pilocarpinum, and morphium sulphate.

